

[O-229] COMPARISON OF LABORATORY AND CLINICAL OUTCOMES BETWEEN FRESH AND VITRIFIED/WARMED SIBLING OOCYTES OBTAINED FROM 30-39 YEAR OLD IVF PATIENTS.

Z. P. Nagy, C.-C. Chang, D. P. Bernal, D. B. Shapiro, D. Mitchell-Leef, H. I. Kort Reproductive Biology Associates, Atlanta, GA

OBJECTIVE: Our objective was to investigate the possible differences in laboratory and clinical outcomes between fresh and vitrified/warmed sibling oocytes.

DESIGN: Prospective study.

MATERIALS AND METHODS: Inclusion criteria were: 1, patients consented to the IRB approved study; 2, maternal age between 30-39 years (34.9 ± 3.1); and 3, greater than 10 MII oocytes obtained. MII oocytes from every patient were randomly divided into two groups: vitrified/warmed (group A) and fresh sibling oocytes (group B). Cryopreservation of oocytes was performed by vitrification with 15% ethylene glycol, 15% DMSO and 0.5 M sucrose. Oocytes were fertilized by ICSI 2-3 h after warming, and fresh sibling oocytes were also fertilized at the same time. On day 5, embryos were assessed and only embryos derived from vitrification were transferred. Results were analyzed by the Chi-square ($P < 0.05$) statistical test.

RESULTS: A total of 370 MII oocytes were retrieved from 21 study participants. One hundred eighty-four oocytes were allocated to group A and 186 oocytes was assigned to group B. One hundred forty-seven oocytes survived after vitrification and warming (79.9%). Fertilization rates were 66.3% and 73.1% (NS) in groups A and B. Blastocyst formation rates were 62% (76/122) and 56% (76/136; NS), in groups A and B. Fifty blastocysts were transferred to 21 patients (2.38 ± 0.7); 13 out of 21 had positive hCG (61.9%). Eight patients had a clinical pregnancy (11 FCAs were detected; 22% implantation rate). To date, nine babies have been born from 6 deliveries, and the other 2 pregnancies are still ongoing.

CONCLUSIONS: This study demonstrates a high survival, fertilization and embryo development after vitrification/warming of oocytes obtained from 30-39 year old IVF patients; these outcomes are very similar to those obtained using the sibling (fresh) oocytes. All together, these results suggest that the effect of vitrification is minimal on oocyte physiology, making its routine use applicable for patients of ages 30 to 39 years old.

Supported by: Study Grant from EMD Serono.

Wednesday, October 21, 2009 5:30 PM

Oral Presentation: Fertility Preservation Special Interest Group

[Close Window](#)